

ABSTRACT OF THE DISCLOSURE

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The present invention relates to antagonists of
vertebrate growth hormones obtained by mutation of the third
alpha helix of such proteins (especially bovine or human
5 GHs). These mutants have growth-inhibitory or other GH-
antagonizing effects. These novel hormones may be
administered exogenously to animals, or transgenic animals
may be made that express the antagonist. Animals have been
made which exhibited a reduced growth phenotype. The
10 invention also describes methods of treating acromegaly,
gigantism, cancer, diabetes, vascular eye diseases (diabetic
retinopathy, retinopathy of prematurity, age-related macular
degeneration, retinopathy of sickle-cell anemia, etc.) as
well as nephropathy and other diseases, by administering an
15 effective amount of a growth hormone antagonist. The
invention also provides pharmaceutical formulations
comprising one or more growth hormone antagonists.

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